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Claims

[c1] 1. A method of fabricating a light guide plate, comprising the steps of:
providing a thin film having a transfer material layer thereon;
providing a molding machine having a cavity therein;
disposing the thin film inside the molding machine such that at least a portion of the transfer material layer is located within the cavity; and
forming a light guide plate body inside the cavity such that the transfer material layer is transferred on the light guide plate body.

[c2] 2. The method of claim 1, wherein the transfer material layer comprises a light-scattering patterned layer.

[c3] 3. The method of claim 1, wherein a step of forming the transfer material layer over the thin film comprises:
forming a light-reflecting layer over the thin film; and
forming a light-scattering patterned layer over the light-reflecting layer.

[c4] 4. The method of claim 3, wherein the light guide plate body comprises a light output surface, a bottom surface,

at least a light incident surface and a plurality of side surfaces, wherein the light incident surface and the side surfaces are adjacent to and positioned between the bottom surface and the light output surface, and the light-scattering patterned layer and the light-reflecting layer are transferred on the bottom surface.

[c5] 5. The method of claim 4, wherein the light-reflecting layer is further transferred on the side surfaces.

[c6] 6. The method of claim 1, wherein the step of disposing the thin film inside the molding machine comprises applying a tape-spooling mechanism to reel the thin film over the molding machine so that at least a portion of the transfer material layer is disposed inside the cavity.

[c7] 7. The method of claim 6, wherein the transfer material layer comprises a plurality of patterned blocks so that at least one of the patterned blocks aligns with the cavity after reeling the thin film forward a fixed distance.

[c8] 8. A light guide plate, comprising:
a light guide plate body having a light output surface, a bottom surface, at least a light incident surface and a plurality of side surfaces, wherein the light incident surface and the side surfaces are adjacent to and positioned between the bottom surface and the light output surface;

and

a transfer material layer disposed on the bottom surface.

[c9] 9. The light guide plate of claim 8, wherein the transfer material layer and the light guide plate body are formed into a unity.

[c10] 10. The light guide plate of claim 8, wherein the transfer material layer comprises a light-scattering patterned layer.

[c11] 11. The light guide plate of claim 8, wherein the transfer material layer further comprises:

a light-scattering patterned layer disposed on the bottom surface; and

a light-reflecting layer disposed over the bottom surface and covering the light-scattering patterned layer.

[c12] 12. The light guide plate of claim 11, wherein the light-reflecting layer is disposed on the side surfaces.